

Amendment to the Claims:

1. (Currently Amended) A positioning method for a radio system, the method comprising:

receiving signals at a unit of the system;

applying at least one test on the received signals prior to processing the

5 signals;

~~in accordance with the applied test, [[to]] selecting one of a processing operation on the signals, the operation being one of the following: a correlation processing operation[[],] and a leading edge processing operation; and~~

~~performing then effecting the selected one of the correlation processing~~

10 ~~operation and the leading edge processing operation.~~

2. (Previously Presented) The method of claim 1, wherein applying the test comprises:

determining whether a signal level of the received signal is above a threshold value.

3. (Currently Amended) The method of claim 2, wherein applying the test further including includes:

in response to the level of the received signal being below the threshold value, selecting the correlation processing operation.

4. (Currently Amended) The method of claim 2, wherein applying the test further comprising includes :

when the level of the received signal is above the threshold value, testing whether a leading edge gradient is above a gradient threshold value.

5. (Currently Amended) A positioning method for a radio system, the method comprising:

receiving signals at a unit of the system;

5 applying at least one test on the received signals to select a processing operation on the signals, the operation being one of the following: a correlation processing operation[[,]] and a leading edge processing operation; [[and]]

~~then effecting the operation selected;~~

wherein the applied test applied comprises:

10 determining whether a signal level of the received signal is above a threshold value;

wherein, when the level of the received signal is below the threshold value, selecting the correlation processing operation—is selected;

15 wherein, when a leading edge gradient is below a gradient threshold value, selecting the leading edge processing operation; and is selected

effecting the selected operation.

6. (Currently Amended) The method of claim 4, further including wherein applying the test further includes:

in response to the leading edge gradient being above the gradient threshold value, selecting the correlation processing operation.

7. (Currently Amended) The method of claim 1, further comprising: repeating the test application and operation steps at predetermined intervals.

8. (Previously Presented) The method of claim 1, further comprising: coherently superposing received pulses before the test application step.

9. (Currently Amended) The method of claim 1 further comprising: convolution of convolving a pulse with a bump function.

10. (Previously Presented) The method of claim 1, further comprising:
in response to a signal level being below a signal level threshold,
extending a receiving time period for the signal and applying the at least one test
again.

11. (Previously Presented) The method of claim 1, further comprising:
before testing whether a leading edge gradient is above a threshold
value, reducing a next transmit period.

12. (Previously Presented) The method according to claim 1, further
comprising:

reducing a time period for a leading edge test for operation in a power-
saving mode.

13. (Previously Presented) The method according to claim 1, further
comprising:

effecting the leading edge processing operation after selection with no
intermediate testing or processing.

14. (Currently Amended) [[The]] A positioning method according to
claim 1 for a radio system, the method comprising:

receiving signals at a unit of the system;
applying at least one test on the received signals prior to processing the
5 signals to select a processing operation on the signals, the operation being one of the
following: a correlation processing operation, and a leading edge processing
operation;

then effecting the selected operation; and

measuring a gradient using the formula:

10 $i = Cdv/Dt$

Where, V=voltage of a signal waveform,

C=capacitance,

i=current, and
t=time.

15. (Previously Presented) The method according to claim 1 wherein the leading edge processing operation comprises:

differentiating a received signal voltage or peak and locating a zero-crossing (point of inflexion).

16. (Previously Presented) A computer program product directly loadable into a internal memory of a digital computer, comprising:

software code portions for controlling the digital computer to perform the method of claim 1 when said product is run on a computer.

17. (Currently Amended) A computer-readable medium carrying software code ~~for controlling a~~ which when run on a computer controls the computer to perform the method of: ~~claim 1 when said software code is run on the computer receiving signals at a unit of a system;~~

5 ~~applying at least one test on the received signals prior to processing the received signals to select among selectable processing operations for processing the signals, the selected processing operation being only one of: a correlation processing operation and a leading edge processing operation; and~~

10 ~~then effecting only the selected one of the correlation and leading edge operations.~~

18-19. (Cancelled)

20. (Currently Amended) A positioning apparatus for a radio system, the apparatus comprising:

5 a receiver ~~means to receive~~ which receives radio frequency signals which have potentially suffered at least one of noise degradation and multi-path degradation in a propagation environment;

testing means for testing the received radio frequency signals, which have not been subject to a correlation processing operation, for at least noise degradation and multi-path degradation and selecting one of:

10

a correlation processing operation and

a leading edge processing operation based on the

testing; and

a processing means for processor which subsequently processes the tested radiofrequency signals with the selected one of the correlation based processing operation and the leading edge processing operation.

21. (Previously Presented) The apparatus of claim 20, wherein the testing means includes:

means to determine whether a signal level of the received radio frequency signal is above a threshold value.

22. (Previously Presented) The apparatus of claim 21, wherein the testing means includes:

means which selects the correlation processing operation in response to the signal level of the received signal being below the level threshold value.

23. (Previously Presented) The apparatus of claim 22, wherein the testing means includes:

means to test signals with signal level above the level threshold value to determine whether the signal has a leading edge gradient above a gradient threshold 5 value.

24. (Previously Presented) The apparatus of claim 23, wherein the testing means includes:

means which selects:

the leading edge processing operation in response to the leading edge 5 gradient being below the gradient threshold value, and

the correlation processing operation in response to the leading edge gradient being above the gradient threshold value.

25. (Cancelled)

26. (Previously Presented) The apparatus of any of claim 20, wherein the testing means includes:

means to cause the testing means to repeat the testing at predetermined intervals.

27. (Currently Amended) [[The]] A positioning method of claim 3, further including for a radio system, the method comprising:

receiving signals at a unit of the system;

applying at least one test on the received signals prior to processing the

5 signals to select between a correlation processing operation and a leading edge processing operation, the test including:

determining whether a signal level of the received signal is above a threshold value;

10 in response to the level of the received signal being below the threshold value, selecting the correlation processing operation;

when the level of the received signal is above the threshold value, testing whether a leading edge gradient is above a gradient threshold value;

15 in response to the leading edge gradient value being below the gradient threshold value, performing—selecting the leading edge processing operation on the signal; and

20 in response to the leading edge being above the gradient threshold value, performing—selecting the correction—correlation processing operation; and on the signal.